

creating a service session profile for the desired service, wherein the service session profile includes one or more of the extracted service parameters required by the desired service, and wherein the service session profile is used by a session server associated with the data-over-cable system to activate the desired service;

5 associating the service session profile with a deferred inactive service identifier for the first network device, wherein the deferred inactive service identifier is used to activate the desired service at a later time; and

returning the deferred inactive service identifier to the first network device in a second message.

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Claim 1 has been amended to correct for typing mistakes. Therefore, this amendment does not narrow the scope of Claim 1 within the meaning of *Festo Corp. v. Shoketsu, Kinzouk Kogyo Kabushiki Co.*, No. 95-1066, 2000 WL 1753646 (Fed. Cir. Nov. 29, 2000). A marked-up copy of the amended Claim 1 is submitted in Appendix A.

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#### Remarks

Claims 1-30 are pending in the application. Claims 1, 12, 20, 24, 26, 28, and 29 are in an independent format. The Applicants hereby respond to the Office Action based on the following remarks.

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#### Information Disclosure Statement

The Examiner states that the Information Disclosure Statements filed on March 15, 1999 and November 29, 1999 are missing. The Applicants resubmit the above-mentioned Information Disclosure Statements with this Office Action Response and request favorable reconsideration.

### Section 102 Rejection

In the Office Action, the Examiner rejected Claims 1-8, 10-17, 20-22 and 24-30 under 35 U.S.C. §102(a) as being anticipated by "Data-over-Cable Service Interface Specification ("DOCSIS") Radio Frequency Interface Specification (SP-RFI-I04-980724), hereinafter "DOSCIS". The Applicants respectfully traverse the Examiner's rejections of Claims 1-8, 10-17, 20-22, and 24-30 based on the following Section 102 Remarks.

### Section 102 Remarks

The Examiner is reminded that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *Vardegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2USPQ2d 1051, 1053 (Fed. Cir. 1987). In addition, the identical invention must be shown in as complete detail as is contained in the claimed invention. *Richardson vs. Suzuki Motor Co.*, 868 F. 2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989).

The Applicants' Claim 1 recites a method for providing dynamic services, including receiving a first message on a second network device on a data-over-cable system from a first network device, wherein the message includes a plurality of service parameters for a desired service for a service device, extracting the plurality of service parameters for the desired service from the first message, creating a service session profile for the desired service, wherein the service session profile is used by a session server associated with the data-over-cable system to activate the desired service. The method further includes associating the service session profile with a deferred inactive service identifier for the first network device, wherein the deferred

inactive service identifier is used to activate the desired service at a later time, and returning the deferred inactive service identifier to the first network device in a second message.

The DOCSIS reference does not expressly or inherently describe the concept of using deferred inactive service identifiers, creating a service session profile including the deferred inactive service identifiers, and using the service session profile and the deferred inactive service identifier to activate the desired service at a later time, as claimed in the Applicants' Claim 1.

The Examiner asserts "DOCSIS teaches a registration response message with the corresponding service parameters with a MAC service ID, where the MAC header activates the service at the cable modem." Further, according to the Examiner, "DOCSIS teaches returning the MAC service ID to the cable modem in the registration response." However, according to DOCSIS, the MAC service ID specified in the response corresponds to the Initialization SID specified in the registration request. Further, as specified in DOCSIS (page 79), "the Initialization SID must no longer be used once the REG-RSP is received." Thus, DOCSIS does not describe the concept of using a deferred inactive service identifier to activate a desired service at a later time.

Further, the Examiner asserts "the MAC header activates the service at the cable modem." However, according to the Applicants' Claim 1, Claim 1 recites returning a deferred inactive service identifier to the first network device, where the deferred inactive service identifier is used to activate the desired service at a later time, and not at the time when the registration response message is received from the second network device (CMTS), as described in DOCSIS.

The DOCSIS reference does not describe at least the concept of providing dynamic services using a deferred inactive service identifier that may be used to activate a desired service at a later time. Thus, Claim 1 is not anticipated by DOCSIS.

Claims 2-8 and 10-11 add further limitations to Claim 1 and are allowable for at least the reasons provided above. Claim 2 recites a computer readable medium having stored therein instructions to executed the method of claim 1, and Claim 3 defines the first network device as a cable modem and the second network device as a cable modem termination system. Claims 2 and 3 further define Claim 1, and, thus, are allowable for the reasons provided above.

Regarding Claim 4, the Examiner asserts "DOCSIS teaches SID, which reads on an inactive service identifier as a Medium Access Control (MAC) Protocol Service Identifier." The Applicants submit that DOCSIS does not describe inactive service identifiers that may be used to activate a service at a later time, as discussed in reference to Claim 1.

Regarding Claim 5, the Examiner asserts "DOCSIS teaches a service parameter of class-of-service." However, in the Applicants' Claim 1, the desired service, that may be a class-of-service, is associated with a deferred inactive service identifier, and the deferred inactive service identifier may be used to activate the service at a later time, the aspects of the Applicants' invention that are not described in DOCSIS. Regarding Claim 6, the Examiner asserts that DOCSIS describes the first message being a registration request, and the second message being a registration response. However, DOCSIS does not describe returning a deferred inactive service identifier in the second message, as claimed in the Applicants' Claim 1. Further, in reference to Claim 7, the Examiner asserts that DOCSIS describes encoding of the registration response message in the TLV format. Once again, Claim 7 adds a further limitation to Claim 1 reciting

the second message including the deferred inactive service identifier that is not described in DOCSIS.

The Applicants' Claim 8 recites further steps of the method in Claim 1 for activating a deferred inactive service. Specifically, Claim 8 recites receiving a service request from the first  
5 network device on the second network device to activate a desired service, wherein the service request includes a deferred inactive service identifier sent to the first network device, and wherein the service request is initiated by a service device associated with the first network device. Claim 8 further recites activating the desired service on the data-over-cable system using the service session profile associated with the deferred inactive service identifier, changing the  
10 deferred inactive service identifier into a deferred active service identifier, and generating a service event on a service server associated with the data-over-cable system to request activation of the desired service.

The Examiner asserts "DOCSIS teaches service IDs to support RSVP and RTP protocols, which activate a desired service." The Examiner further asserts "the CM requests service from  
15 the CMTS to activate RSVP," and "DOCSIS teaches activating the desired service using the SID, thereby changing the deferred inactive SID into an active SID." The Applicants submit that the section in DOCSIS cited by the Examiner does not describe the use of deferred inactive service identifiers. On the contrary, a CMTS generates a Dynamic Service Addition message including a new SID. The DOCSIS section cited by the Examiner does not describe using an  
20 existing deferred inactive service identifier to activate the desired service from the first client device (a CM), as claimed in Applicants' Claim 8.

Claim 10 defines a service event of Claim 8 that is used to request activation of the desired service as an authentication, authorization or an accounting event. The Examiner asserts

that DOCSIS teaches authorization and authentication. However, the DOCSIS section cited by the Examiner recites authenticating the cable modem during a registration process, and not using an authentication, authorization or an accounting event to request activation of the desired service, as claimed in Applicants' Claims 8 and 10.

5           Claim 11 depends on Claim 1 and recites receiving a service request from the first network device on the second network device to deactivate a desired service, wherein the service request includes a deferred active service identifier, and wherein the service request is initialed by a service device associated with the first network device. Claim 11 further recites deactivating the desired service on the data-over-cable system, changing the deferred active  
10   service identifier into a deferred inactive service identifier, and generating a service event on a service server associated with the data-over-cable system to request deactivation of the desired service.

          The Examiner asserts "DOCSIS teaches the use of both dynamic service addition and deletion messages sent to activate and deactivate services." However, DOCSIS does not teach  
15   deactivating of a desired service using the concept of deferred service identifiers. DOCSIS teaches service addition/deletion and not service activation/deactivation, as claimed in the Applicants' claims. According to DOCSIS, "the Dynamic Service Deletion message is transmitted from CMTS to CM to delete an unused SID immediately." Thus, the DOCSIS reference does not describe "changing the deferred active service identifier to a deferred inactive  
20   service identifier," as claimed in the Applicants' Claim 11. Further, DOCSIS does not describe receiving of such a request from a CM at a CMTS.

          DOCSIS does not describe each and every element of Claims 1-8 and 10-11. Thus, Claims 1-8 and 10-11 should be allowable in their present format.

Claim 12 is directed to a method for providing dynamic services including receiving a service request from a first network device on a second network device on a data-over-cable system to activate a desired service, wherein the service request includes a deferred inactive service identifier sent to the first network device by the second network device, activating the  
5 desired service on the data-over-cable system using a service session profile associated with the deferred inactive service identifier created during a registration of the first network device with the second network device, changing the deferred inactive service identifier into a deferred active service identifier, and generating a service event on a service server associated with the data-over-cable system to request activation of the desired service.

10 Remarks for Claims 1 and 8 are incorporated herein by reference. The Applicants submit that DOCSIS does not describe the use of an inactive deferred service identifier, created during a registration process for a first network device, to activate a desired service, as claimed in the Applicants' Claim 12. Thus, Claim 12 is not anticipated and should be allowable.

Claims 13-17 add further limitations to Claim 12. Thus, Claims 13-17 should be  
15 allowable as well.

Claim 20 is directed to a method for providing dynamic services including receiving a service request from a first network device on a second network device on a data-over-cable system to deactivate a desired service, wherein the service request includes a deferred active service identifier, and wherein the service request is initialed by a service device associated with  
20 the first network device. The method further includes deactivating the desired service on the data-over-cable system, changing the deferred active service identifier into a deferred inactive service identifier, and generating an event on a service server associated with the data-over-cable system to request deactivation of the desired service.

The arguments for Claim 11 are incorporated herein by reference. In view of those arguments, Claim 20 should be allowable. Claims 21-22 add further limitations to Claim 20. Thus, Claims 21 and 22 are allowable as well.

Claim 24 is directed to a method for providing dynamic services including the steps of  
5 sending a service request from a first network device on a data-over-cable system to a second network device on the data-over-cable system to activate a deferred inactive service, wherein the service request includes a deferred inactive service identifier sent to the first network device by the second network device that is used to activate a deferred inactive service, and wherein the service request is initialed by a service device associated with the first network device, and  
10 receiving a service notification from service server associated with the second network device indicating that the deferred inactive service has been activated by the second network device.

The arguments for Claim 8 are incorporated herein by reference. In view of those arguments, Claim 24 and Claim 25 that depends from Claim 24 should be allowable as well.

Claim 26 is directed to a method for providing dynamic services including sending a  
15 service request from a first network device on a data-over-cable system to a second network device on the data-over-cable system to activate a deferred inactive service, wherein the service request includes a deferred inactive service identifier sent to the first network device by the second network device that is used to activate a deferred inactive service, and receiving a service notification from a service server associated with the second network device indicating that the  
20 deferred inactive service has been activated by the second network device.

The arguments for Claims 11 and 20 are incorporated herein by reference. In view of those arguments, Claim 26 and Claim 27 that depends from Claim 26 should be allowable.



Claim 28 is directed to a system for providing dynamic services to a network device in a data-over-cable system, the system comprising a network device for providing a desired service requested by a service device, a service session profile including one or more of the service parameters required for a desired service and used by a service server associated with a data-over-cable system for activating the desired service, a deferred inactive service identifier associated with the service session profile for allowing activation of a desired service, a deferred active service identifier created from a deferred inactive service identifier for indicating that a desired service is active, and a service event generator for generating a service event on a service server to request a change in status of a desired service on a data-over-cable system.

The arguments for limitations in Claim 28 have been addressed in reference to Claims 1, 8 and 11. The arguments for Claims 1, 8 and 11 are incorporated herein by reference. In view of those arguments, Claim 28 should be allowable as well.

Claim 29 is directed to a method for providing dynamic services, the method comprising receiving a registration message on a cable modem termination system on a data-over-cable system from a cable modem on the data-over-cable system, wherein the registration message includes a plurality of service parameters for one or more desired services for one or more service devices associated with the cable modem, extracting the plurality of service parameters for the one or more desired services from the registration message, creating one or more service session profiles for the one or more desired services, wherein the service session profiles include one or more of the extracted service parameters required by the one or more desired services and wherein the service session profiles are used by session servers associated with the data-over-cable system to provide the one or more desired services with required parameters. The method further includes associating the one or more service session profiles with one or more deferred

inactive medium access control protocol service identifiers, wherein the one or more deferred inactive medium access control protocol service identifiers are used to activate the one or more desired services at a later time, and returning the one or more deferred inactive medium access control service identifiers to the cable modem in a registration response message. Further, per  
5 Claim 29, the deferred medium access control service identifiers are used to cause activation of the one or more desired service by one or more service devices associated with the cable modem, and the deferred medium access control service identifiers are used to generate events to request a change in status in one or more desired services on one or more service servers associated with the cable modem termination system.

10 The arguments for Claims 1, 8 and 11 are incorporated herein by reference. DOCSIS does not describe deferred inactive medium access control protocol service identifiers, providing such identifiers in a registration response message to a cable modem, or using such identifiers to activate one or more services associated with the identifiers, as claimed in the Applicants' Claim 29. Thus, Claim 29 and Claim 30 that depends from Claim 29 should be allowable.

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Section 103 Rejections

In the Office Action, the Examiner rejected Claims 9 and 18 under 35 U.S.C 103(a) as being unpatentable over DOCSIS. Further, the Examiner rejected Claims 19 and 23 under 35 U.S.C. 103(a) as being unpatentable over DOCSIS in view of U.S. Patent No. 6,337,858 to Petty  
20 et al. The Applicants respectfully traverse the Examiner's rejections of Claims 9, 18, 19 and 23 based on the following Section 103 Remarks.

### Section 103 Remarks

The Examiner is reminded that to support the conclusion that the claimed invention is directed to obvious subject matter, a reference must expressly or impliedly suggest the claimed invention. *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). The arguments  
5 from Section 102 Remarks for Claims 1 and 12 are incorporated herein by reference. The DOCSIS reference does not expressly or impliedly teach or suggest the concept of deferred inactive and deferred active service identifiers. Thus, DOCSIS does not teach or suggest the claimed invention. Claims 9 and 18 depend on Claims 1 and 12 respectively and, thus, for the reasons provided above for the independent Claims 1 and 12, the dependent Claims 9 and 18  
10 each add additional limitations to the Applicants' independent Claims 1 and 12 and make them individually allowable.

The DOCSIS reference does not expressly or impliedly teach the concept of deferred inactive service identifiers and using such identifiers to activate a desired service, as claimed in the Applicants' Claim 12 from which Claim 19 depends. Similarly, DOCSIS does not teach the  
15 concept of using a deferred active service identifiers and using such identifiers to deactivate a desired service, as claimed in the Applicants' Claim 20 from which Claim 23 depends. Therefore, combining DOCSIS with another reference as the Examiner has done is not proper to support an obviousness rejection. The arguments for Claim 20 from Section 102 Rejections are incorporated herein by reference.

20 Claims 9, 18, 19, and 23 add further limitations to each independent Claim 1, 12, and 23 from which they depend. Employing Petty in DOCSIS does not produce the claimed invention. Thus, in view of the arguments provided for each independent Claim 1, 12, and 23, Claims 9, 18, 19, and 23 should be allowable as well.

Conclusion

The cited art fails to disclose, suggest or teach the combination of limitations of the pending claims. The features of the Applicants' invention are not described, suggested or taught by the cited references. Applicants therefore submit that the claims in their present form are allowable and request the Examiner withdrew the rejection of claims 1-30.

Respectfully submitted,

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